



## DISC-TRANSFER ROLL FOR DISC DEVICE

### BACKGROUND OF THE INVENTION

5 1. Field of the Invention

The present invention relates to a disc-transfer roll, a pair of which is to be arranged on the opposite sides of the disc slot to sandwich and transfer a disc in a disc device.

10 2. Related Art

A disc device rotates a disc such as a CD, DVD or the like on its turntable for recording and/or reproducing sound or pictures from the disc. There are two main ways to load a disc onto a turntable. One is to put a disc on a disc tray which appears from the disc slot of the disc device, and then the disc tray is withdrawn to carry the disc to the turntable. The other is to insert the disc from the disc slot directly by hand, and then the disc is pulled in and carried to the turntable. The present invention relates to the latter disc-loading mechanism.

Such pull-in type disc loader is shown in JP 63-298761(A) as entitled "Disc Player" and JP 2002-304798(A) as entitled "Disc Recording and/or Reproducing Device". JP 63-298761(A) discloses upper and lower transfer rolls so arranged that the confronting rolls may sandwich a disc when it appears inside from the disc slot, and that they rotate in opposite directions to transfer the disc to the turntable in the disc device. There is, however, a fear that the disc can be scratched when it is pinched and transferred by the opposite rotating rolls. Also, a disadvantageously unpleasant sound may be produced, and the rotating rolls may slip on the disc, thereby losing exact control in transportation.

JP 2002-304798(A) discloses vertical rolls each having a circumferential groove of arcuate cross-section formed in the middle to catch a disc by its circumference. The roll has a damper member applied to its circumferential groove. The damper member is of rubber or any other material of increased friction index. The area in which the damper member can be put in contact with the disc circumference is very small, and the damper member is not hollow. The damper member, therefore, cannot have use of its own flexibility to absorb and share the burden of the disc and is insufficient for the purpose.

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